

Appl. No. 10/602,960
Amdt. Dated May 22, 2006
Reply to Office Action of February 21, 2006

Amendment to the Claims:

This listing will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A water-absorbent structure comprising:

a panel-shaped assembly of thermoplastic synthetic fibers having upper and lower surfaces extending in parallel to each other, other and comprising a mixture of thermoplastic synthetic fibers, cellulose-based fibers and a super-absorbent polymer, which mixture is formed into partition walls that are configured to define ~~adapted to be swollen after absorption of water both contained in said assembly of said thermoplastic synthetic fibers served as water absorbing materials wherein at least one of said upper and lower surfaces is wrapped with water pervious sheet, said water absorbent structure further comprising: said assembly being in the form of a honeycomb construction adapted to be~~ that is elastically compressed compressible in a thickness direction and ~~having~~ has a plurality of through-holes extending parallel to one another in a direction parallel to said upper and lower surfaces, each of said through-holes having a cross-sectional dimension that is larger than any one of interstices of said thermoplastic synthetic fibers in said assembly, wherein said assembly is normally kept in a state compressed in said thickness direction with said through-holes being flattened and adapted to be elastically swollen in said thickness direction so that said flattened through-holes are restored to the initial cross-sectional shape thereof as said super-absorbent polymer absorbs water

Appl. No. 10/602,960
Amdt. Dated May 22, 2006
Reply to Office Action of February 21, 2006

and is ~~swollen~~, swollen, at least one of said upper and lower surfaces of said assembly is wrapped with water-pervious sheet.

Claim 2 (Currently amended): The water-absorbent structure according to claim 1, wherein said super-absorbent polymer is in the form of at least one of particles and fibers. ~~provided in particulate or fibrous form.~~

Claim 3 (Original): The water-absorbent structure according to claim 1, wherein said assembly comprises a plurality of honeycomb thin leaves placed upon one another in a transverse direction in which said through-holes extend, each of said honeycomb thin leaves have a width of 3 to 30 mm as measured in said transverse direction.

Claim 4 (Currently amended): The water-absorbent structure according to claim 3, wherein said through-holes in ~~each~~ adjacent ones of said pair of thin leaves adjacent to each other are at least partially connected.

Claim 5 (Currently amended): The water-absorbent structure according to claim 1, wherein said thermoplastic synthetic fibers comprise crimped-type fibers. ~~are of crimped type.~~

Claim 6 (Currently amended): The water-absorbent structure according to claim 1, wherein said

Appl. No. 10/602,960
Amdt. Dated May 22, 2006
Reply to Office Action of February 21, 2006

assembly, thermoplastic synthetic fibers, said cellulose-based fibers and said super-absorbent polymer are mixed at a ratio of 5-80 wt %:5-60 wt %:10-80 wt %.

Claim 7 (Currently amended): The water-absorbent structure according to claim 1, wherein a cross-sectional shape of said ~~through-hole~~ through-holes is a substantially rectangle and a diagonal one of diagonals of said rectangle is substantially ~~in coincidence~~ aligned with said thickness ~~direction~~. direction of said assembly.

Claim 8 (Currently amended): The water-absorbent structure according to claim 1, wherein said ~~assembly includes~~ at least two said through-holes are aligned in said thickness ~~direction~~. direction of said assembly.

Claim 9 (Withdrawn): Process for making a water-absorbent structure comprising a panel-shaped assembly of thermoplastic synthetic fibers having upper and lower surfaces extending in parallel to each other, cellulose-based fibers and super-absorbent polymer adapted to be swollen after absorption of water both contained in said assembly of said thermoplastic synthetic fibers served as water-absorbing materials wherein at least one of said upper and lower surfaces is wrapped with water-pervious sheets, said process being characterized by: said assembly is in the form of a honeycomb construction adapted to be elastically compressed in a thickness direction and having a plurality of through-holes extending parallel to one another in a direction parallel to said upper and lower surfaces, each of said through-holes has a cross-sectional dimension larger than any one of

Appl. No. 10/602,960
Amdt. Dated May 22, 2006
Reply to Office Action of February 21, 2006

interstices of said thermoplastic synthetic fibers in said assembly, said process comprises the steps of: compressing said assembly in said thickness direction while said water absorbing materials are in a wetted condition so that said through-holes are flattened; drying said water absorbing materials so as to maintain said assembly in a compressed state; and wrapping at least one of said upper and lower surfaces with said water-pervious sheets before or after said step of compressing.

Claim 10 (Withdrawn): The process according to claim 9, wherein said super-absorbent polymer is provided in particulate or fibrous form.

Claim 11 (Withdrawn): The process according to claim 9, wherein said process further comprises the steps of feeding a mixture of said thermoplastic synthetic fibers, said cellulose-based fibers and said super-absorbent polymer into a molding die and welding said thermoplastic synthetic fibers at crossways thereof within said molding die under heating to obtain said assembly.

Claim 12 (Withdrawn): The process according to claim 9, wherein said assembly includes at least two said through-holes aligned in said thickness direction.